Fixed Thick Film Low Ohmic Chip Resistors For Current Detection

UCR01 (1005 size : 1 / 8W)

●Features

1) Superior rated power.
2) Stable, low resistance guaranteed regardless of the surrounding environment.
3) Thick film resistive elements were used to create this lineup of ultra-low resistance products ranging from 68mΩ to 910mΩ.
4) Chip resistors ideal for current detection.
5) ROHM resistors have approved ISO9001- / ISO/TS 16949- certification.

●Ratings

Design and specifications are subject to change without notice. Carefully check the specification sheet before using or ordering it.

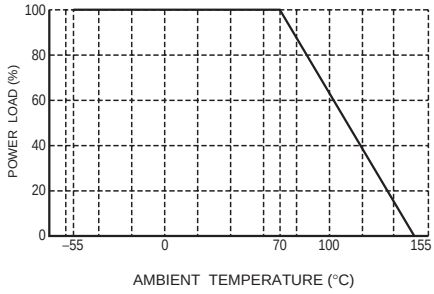
Item	Conditions	Specifications
Rated power	Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.  Fig.1	0.125W (1 / 8W) at 70°C
Rated voltage	The voltage rating is calculated by the following equation. $E=\sqrt{P\times R}$ E: Rated voltage (V) P: Rated power (W) R: Nominal resistance (Ω)	
Nominal resistance	See Table 1.	
Operating temperature		–55°C to + 155°C

Table 1

Resistance range (Ω)	Resistance tolerance	Special specification	Resistance temperature coefficient (ppm/°C)
0.068 to 0.091 (E24)	F (±1%) J (±5%)	S	0 to 300
0.1 to 0.2 (E24)		L	0 to 250
0.22 to 0.91 (E24)			0 to 200

●Before using components in circuits where they will be exposed to transients such as pulse loads (short–duration, high– level loads), be certain to evaluate the component in the mounted state. In addition, the reliability and performance of this component cannot be guaranteed if it is used with a steady state voltage that is greater than its rated voltage.

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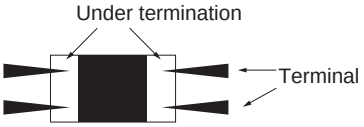
●Characteristics

Item	Guaranteed value Resistor type	Test conditions (JIS C 5201-1)
Resistance	F : ±1% J : ±5%	JIS C 5201-1 4.5 Measuring method : Measure under termination 
Variation of resistance with temperature	See Table.1	JIS C 5201-1 4.8 Measurement : +25 / +125°C
Overload	± (2.0%+0.005Ω)	JIS C 5201-1 4.13 Rated voltage (current) × 2.5, 5s. 25°C
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.	JIS C 5201-1 4.17 Rosin·Ethanol (25%WT) Soldering condition : 235±5°C Duration of immersion : 2.0±0.5s.
Resistance to soldering heat	± (1.0%+0.005Ω) No remarkable abnormality on the appearance.	JIS C 5201-1 4.18 Soldering condition : 260±5°C Duration of immersion : 10±1s.
Rapid change of temperature	± (1.0%+0.005Ω)	JIS C 5201-1 4.19 Test temp. : –55°C to +125°C 100cyc 0.5h
Damp heat, steady state	± (1.0%+0.005Ω)	JIS C 5201-1 4.24 60°C, 95%RH Test time : 1,000h to 1,048h
Endurance at 70°C	± (5.0%+0.005Ω)	JIS C 5201-1 4.25.1 Rated voltage (current), 70°C 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	± (2.0%+0.005Ω)	JIS C 5201-1 4.25.3 125°C Test time : 1,000h to 1,048h
Resistance to solvent	± (1.0%+0.005Ω)	JIS C 5201-1 4.29 25°C, 60s. Solvent : 2-propanol
Bend strength of the end face plating	Without open.	JIS C 5201-1 4.33

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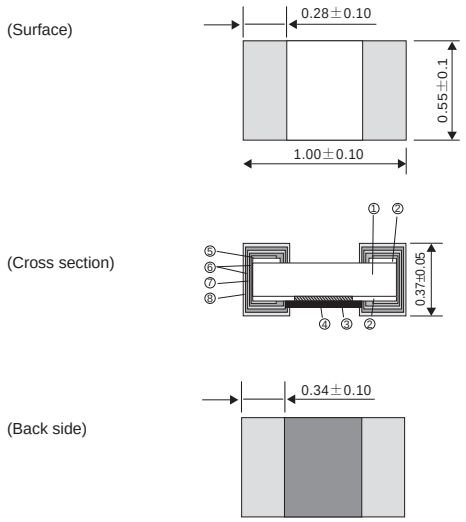
●Dimensions&Construction



No.	Material
①	Alumina substrate
②	Silver thick film electrode
③	Resistive element
④	Over ciating
⑤	Nickel-chrome electrode
⑥	Nickel electrode
⑦	Copper electrode
⑧	Sn electrode

●Part No. Explanation

U C R 0 1 M V P J S □ □ □ □

Part No.

Resistance tolerance

F	±1%
J	±5%

Special part number

S	0.068 to 0.091Ω
L	0.1 to 0.91Ω

Nominal resistance

Resistance code, 3 or 4 digits.
000 denotes jumper type.

Resistance tolerance		Resistance code
FL, FS, JS	:	4 digits
JL	:	3 digits

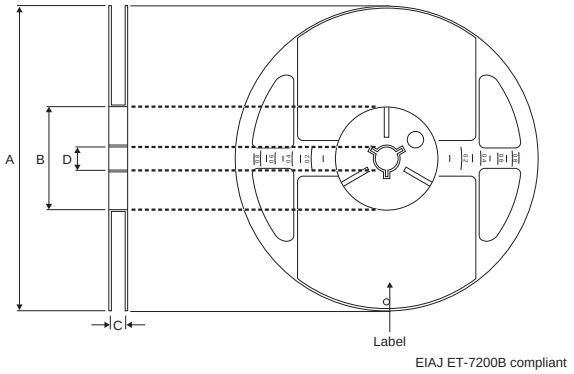
Packaging Specifications Code

Part No.	Code	Resistance tolerance		Packaging specifications	Reel	Basic ordering unit(pcs)
		J(±5%)	F(±1%)			
UCR01	MVP	◎	◎	Paper tape (2mm Pitch)	ϕ180mm (7in.)	10,000

Reel (ϕ180mm) : Compatible with JEITA standard "EIAJ ET-7200B"
◎ : Standard product

●Packaging

Reel

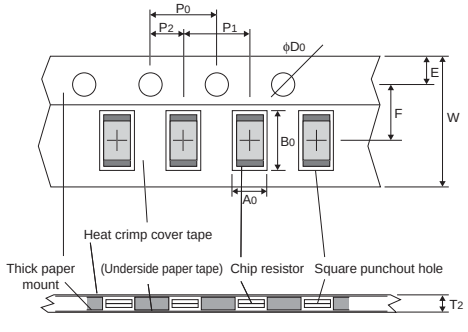


EIAJ ET-7200B compliant

(Unit: mm)

A	B	C	D
ϕ180 $^{0}_{-1.5}$	ϕ60 $^{+1}_{0}$	9 $^{+1.0}_{0}$	ϕ13±0.2

Taping



(Unit: mm)

W	F	E	A0	B0
8.0±0.3	3.5±0.05	1.75±0.1	0.7±0.1	1.2±0.1
D0	P0	P1	P2	T2
ϕ1.5 $^{+0.1}_{0}$	4.0±0.1	2.0±0.05	2.0±0.05	Max. 1.1

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